

TABLE 2
SAMPLING AND DESIGN MATRIX
FALCON REFINERY SUPERFUND SITE
INGLESIDE, TEXAS

SAMPLING TYPE	AREA OF CONCERN NUMBER	INTERVAL (feet bgs)	ANALYSES				
			TCL VOC	TCL SVOC	TAL METALS	PCBs	Herbicides and Pesticides
ON-SITE RANDOM GRID SURFACE AND SUBSURFACE SOIL SAMPLES							
Geoprobe	1N	0 to 0.5	4	4	4	1	1
		0.5 to 5.0	4	4	4	1	1
	1S	0 to 0.5	20	20	20	2	2
		0.5 to 5.0	20	20	20	2	2
TOTAL FOR ON-SITE AOC-1 RANDOM GRID SAMPLES			48	48	48	6	6
QC FOR RANDOM GRID SAMPLES							
QC MS/MSD* {1/20 organics}		Various	3	3	N/A	N/A	1
QC MS/MD* {1/20 organics}		Various	N/A	N/A	N/A	1	N/A
QC trip blank		1	N/A	N/A	N/A	N/A	N/A
QC field duplicate {1/10}		Various	5	5	5	1	1
QC EQUIPMENT RINSATE		N/A	2	2	2	1	1
TOTALGRID QC SAMPLES			10	10	7	3	0
Geoprobe	2	0 to 0.5	4	4	4	1	1
		0.5 to 5.0	4	4	4	1	1
	4	0 to 0.5	5	5	5	1	1
		0.5 to 5.0	5	5	5	1	1
TOTAL FOR ON-SITE AOC-2 and AOC-4 RANDOM GRID SAMPLES			18	18	18	4	4
QC FOR GRID SOIL SAMPLES							
QC MS/MSD* {1/20 organics}		Various	1	1	N/A	N/A	1
QC MS/MD* {1/20 organics}		Various	1	1	N/A	N/A	N/A
QC trip blank		1	1	1	N/A	1	N/A
QC field duplicate {1/10}		Various	2	2	2	1	1
QC equipment rinsate		N/A	1	1	1	1	1
TOTAL GRID QC SAMPLES			6	6	3	3	3

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			TCL VOC	TCL SVOC	TAL METALS	PCBs	Herbicides and Pesticides
OFF-SITE JUDGMENTAL SURFACE AND SUBSURFACE SAMPLES							
Geoprobe	3	0 to 0.5	0	0	0	0	0
		0.5 to 5.0	0	0	0	0	0
	5	0 to 0.5	0	0	0	0	0
		6	0 to 0.5	0	0	0	0
	6		0.5 to 5.0	0	0	0	0
		7	0 to 0.5	0	0	0	0
	7		0.5 to 5.0	0	0	0	0
		TOTAL FOR ON-SITE JUDGMENTAL SAMPLES			0	0	0
QC FOR OFF-SITE JUDGMENTAL SAMPLES							
QC MS/MSD* {1/20 organics}		Various	0	0	N/A	N/A	0
QC MS/MD* {1/20 organics}		Various	N/A	N/A	N/A	0	N/A
QC trip blank {1/cooler for aqueous VOCs}		N/A	N/A	N/A	N/A	N/A	N/A
QC field duplicate {1/10}		Various	0	0	0	0	0
QC EQUIPMENT RINSATE		N/A	0	0	0	0	0
TOTAL JUDGMENTAL QC SAMPLES			0	0	0	0	0
OFF-SITE RANDOM GRID SEDIMENT SAMPLES							
Grab	3	0-0.5	6	6	6	1	1
	5	0-0.5	7	7	7	1	1
TOTAL FOR GRID SAMPLES			6	6	6	1	1
QC FOR GRID SOIL SAMPLES							
QC MS/MSD* {1/20 organics}		Various	1	1	N/A	N/A	1
QC MS/MD* {1/20 organics}		Various	N/A	N/A	N/A	N/A	N/A
QC trip blank {1/cooler for aqueous VOCs}		N/A	N/A	N/A	N/A	N/A	N/A
QC field duplicate {1/10}		Various	1	1	1	1	1
QC equipment rinsate		N/A	1	1	1	1	1
TOTAL GRID QC SAMPLES			3	3	2	2	0

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			TCL VOC	TCL SVOC	TAL METALS	PCBs	Herbicides and Pesticides
GROUNDWATER SAMPLING (7 Monitor Wells)							
Bailer	1N	Shallow aquifer	2	2	2	1	1
	1S	Shallow aquifer	5	5	5	1	1
TOTAL FOR MONITOR WELL SAMPLES			7	7	7	2	2
QC FOR AQUEOUS SAMPLES (MONITOR WELLS)							
QC MS/MSD* {1/20 organics}		Various	1	1	N/A	N/A	1
QC MS/MD* {1/20 organics}		Various	N/A	N/A	N/A	0	N/A
QC trip blank {1/cooler for aqueous VOCs}		N/A	2	1	N/A	N/A	N/A
QC field duplicate {1/10}		Various	1	1	1	1	1
QC Equipment Rinsate		Various	1	1	1	1	1
TOTAL MONITOR WELL QC SAMPLES			5	4	2	2	3
SURFACE WATER SAMPLING							
Grab	3	Surface	16	16	16	2	2
TOTAL FOR SURFACE WATER SAMPLES			16	16	16	2	2
QC FOR AQUEOUS SAMPLES (SURFACE WATER)							
QC MS/MSD* {1/20 organics}		Various	1	1	N/A	N/A	1
QC MS/MD* {1/20 organics}		Various	N/A	N/A	N/A	0	N/A
QC trip blank {1/cooler for aqueous VOCs}		N/A	2	2	N/A	N/A	N/A
QC field duplicate {1/10}		Various	2	2	1	1	1
QC Equipment Rinsate		Various	1	1	1	1	1
TOTAL QC SAMPLES			6	6	2	2	3

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			TCL VOC	TCL SVOC	TAL METALS	PCBs	Herbicides and Pesticides
BACKGROUND SAMPLES (JUDGMENTAL)							
Grab	Sediment	0-0.5	12	12	12	0	0
Geoprobe	Surface Soil	0-0.5	6	6	6	0	0
	Subsurface Soil	0.5-5.0	6	6	6	0	0
TOTAL FOR JUDGMENTAL SAMPLES			24	24	24	0	0
BACKGROUND GROUNDWATER SAMPLING (6 Temporary Wells)							
Bailer	Groundwater	Shallow aquifer	6	6	6	0	0
TOTAL FOR JUDGMENTAL SAMPLES			6	6	6	0	0
BACKGROUND SURFACE WATER SAMPLING							
Grab	Surface Water	Surface	12	12	12	0	0
TOTAL FOR GRID and BACKGROUND SW SAMPLES			12	12	12	0	0
QC FOR ALL BACKGROUND SAMPLING							
QC MS/MSD* {1/20 organics}		Various	2	2	N/A	N/A	0
QC MS/MD* {1/20 organics}		Various	N/A	N/A	N/A	0	N/A
QC trip blank {1/cooler for aqueous VOCs}		N/A	2	2	N/A	N/A	N/A
QC field duplicate {1/10}		Various	4	4	4	0	0
QC Equipment Rinsate		Various	1	1	1	0	0
TOTAL QC SAMPLES			9	9	5	0	0

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			TCL VOC	TCL SVOC	TAL METALS	PCBs	Herbicides and Pesticides
INVESTIGATION-DERIVED WASTE							
Hand sampling device	Site-wide	Drummed Waste	TO BE DETERMINED				
QC FOR INVESTIGATION-DERIVED WASTE							
QC MS/MSD* {1/20 organics}		Various	0	0	N/A	N/A	0
QC MS/MD* {1/20 organics}		Various	N/A	N/A	N/A	0	N/A
QC trip blank {1/cooler for aqueous VOCs}		N/A	0	N/A	N/A	N/A	N/A
QC field duplicate {1/10}		Various	0	0	0	0	0
QC Equipment Rinsate		Various	0	0	0	0	0
TOTAL QC SAMPLES			0	0	0	0	0

* MS/MSD and MS/MDs: These samples do not increase the number of samples, but represent additional volume of sample for laboratory QA/QC.

AOC Area of Concern
bgs Below Ground Surface
MD Matrix Duplicate
MS Matrix Spike
MSD Matrix Spike Duplicate

N/A Not Applicable
PCB Polychlorinated Byphenyls
QC Quality Control
SVOC Semivolatile Organi
VOC Volatile Organic Compound